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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/032,162

DATE: 11/20/2002 P.6

TIME: 11:29:51

Input Set : A:\59331AZ.ST25.txt

Output Set: N:\CRF4\11192002\J032162.raw

3 <110> APPLICANT: BINLEY, JAMES M
 4 SCHUELKE, NORBERT
 5 OLSON, WILLIAM C
 6 PAUL, MADDON J
 7 JOHN, MOORE P
 9 <120> TITLE OF INVENTION: STABILIZED VIRAL ENVELOPE PROTEINS AND USES THEREOF
 11 <130> FILE REFERENCE: 2048/59331az
 13 <140> CURRENT APPLICATION NUMBER: 10/032,162
 C--> 14 <141> CURRENT FILING DATE: 2002-10-24
 16 <150> PRIOR APPLICATION NUMBER: 09/602,864
 17 <151> PRIOR FILING DATE: 2000-06-23
 19 <160> NUMBER OF SEQ ID NOS: 17
 21 <170> SOFTWARE: PatentIn version 3.1
 23 <210> SEQ ID NO: 1
 24 <211> LENGTH: 39
 25 <212> TYPE: PRT
 26 <213> ORGANISM: Human immunodeficiency virus type 1
 28 <400> SEQUENCE: 1
 30 Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys Tyr
 31 1 5 10 15
 34 Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Lys Ala Lys
 35 20 25 30
 38 Arg Arg Val Val Gln Arg Glu
 39 35
 42 <210> SEQ ID NO: 2
 43 <211> LENGTH: 100
 44 <212> TYPE: PRT
 45 <213> ORGANISM: Human immunodeficiency virus type 1
 47 <400> SEQUENCE: 2
 49 Val Glu Lys Leu Trp Val Thr Val Tyr Tyr Gly Val Pro Val Trp Lys
 50 1 5 10 15
 53 Glu Ala Thr Thr Thr Leu Phe Cys Ala Ser Asp Ala Lys Ala Tyr Asp
 54 20 25 30
 57 Thr Glu Val His Asn Val Trp Ala Thr His Ala Cys Val Pro Thr Asp
 58 35 40 45
 61 Pro Asn Pro Gln Glu Val Val Leu Glu Asn Val Thr Glu His Phe Asn
 62 50 55 60
 65 Met Trp Lys Asn Asn Met Val Glu Gln Met Gln Glu Asp Ile Ile Ser
 66 65 70 75 80
 69 Leu Trp Asp Gln Ser Leu Lys Pro Cys Val Lys Leu Thr Pro Leu Cys
 70 85 90 95
 73 Val Thr Leu Asn
 74 100

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77 <210> SEQ ID NO: 3
78 <211> LENGTH: 32
79 <212> TYPE: DNA
80 <213> ORGANISM: Artificial sequence
82 <220> FEATURE:
83 <223> OTHER INFORMATION: primer directed to HIV-1
85 <400> SEQUENCE: 3
86 gtctattatg gggtagctga gaagctgtgg aa 32
89 <210> SEQ ID NO: 4
90 <211> LENGTH: 36
91 <212> TYPE: DNA
92 <213> ORGANISM: ARTIFICIAL SEQUENCE
94 <220> FEATURE:
95 <223> OTHER INFORMATION: PRIMER DIRECTED TO HIV-1
97 <400> SEQUENCE: 4
98 cgcagacgca gattcgaatt aataccacag ccagtt 36
101 <210> SEQ ID NO: 5
102 <211> LENGTH: 60
103 <212> TYPE: DNA
104 <213> ORGANISM: ARTIFICIAL SEQUENCE
106 <220> FEATURE:
107 <223> OTHER INFORMATION: PRIMER DIRECTED TO HIV-1
109 <400> SEQUENCE: 5
110 ctacgacttc gtctccgcct tcgactacgg ggaataggag ctgtgttcct tgggttcctg 60
113 <210> SEQ ID NO: 6
114 <211> LENGTH: 60
115 <212> TYPE: DNA
116 <213> ORGANISM: ARTIFICIAL SEQUENCE
118 <220> FEATURE:
119 <223> OTHER INFORMATION: PRIMER DIRECTED TO HIV-1
121 <400> SEQUENCE: 6
122 tcgaaggcgg agacgaagtc gtagccgcag tgccttggtg ggtgctactc ctaatggttc 60
125 <210> SEQ ID NO: 7
126 <211> LENGTH: 32
127 <212> TYPE: DNA
128 <213> ORGANISM: ARTIFICIAL SEQUENCE
130 <220> FEATURE:
131 <223> OTHER INFORMATION: PRIMER DIRECTED TO HIV-1
133 <400> SEQUENCE: 7
134 gtctattatg gggtagctgt gtggaaagaa gc 32
137 <210> SEQ ID NO: 8
138 <211> LENGTH: 39
139 <212> TYPE: DNA
140 <213> ORGANISM: ARTIFICIAL SEQUENCE
142 <220> FEATURE:
143 <223> OTHER INFORMATION: PRIMER DIRECTED TO ENVELOPE PROTEIN
145 <400> SEQUENCE: 8
146 gtctgagtcg gatcctgtga cacctcagtc attacacag 39
149 <210> SEQ ID NO: 9

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150 <211> LENGTH: 60
151 <212> TYPE: DNA
152 <213> ORGANISM: ARTIFICIAL SEQUENCE
154 <220> FEATURE:
155 <223> OTHER INFORMATION: PRIMER DIRECTED TO ENVELOPE PROTEIN
157 <400> SEQUENCE: 9
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162 <211> LENGTH: 87
163 <212> TYPE: DNA
164 <213> ORGANISM: ARTIFICIAL SEQUENCE
166 <220> FEATURE:
167 <223> OTHER INFORMATION: PRIMER DIRECTED TO ENVELOPE PROTEIN
169 <400> SEQUENCE: 10
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172 cagagtgggg ttaattttac acatggc      87
175 <210> SEQ ID NO: 11
176 <211> LENGTH: 15
177 <212> TYPE: PRT
178 <213> ORGANISM: Human immunodeficiency virus type 1
180 <400> SEQUENCE: 11
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183 1          5          10          15
186 <210> SEQ ID NO: 12
187 <211> LENGTH: 1929
188 <212> TYPE: DNA
189 <213> ORGANISM: Human immunodeficiency virus type 1
191 <400> SEQUENCE: 12
192 gtagaaaagt tgtgggtcac agtctattat ggggtacctg tgtggaaaga agcaaccacc      60
194 actctatttt gtgcatcaga tgctaaagca tatgatacag aggtacataa tgtttgggcc      120
196 acacatgcct gtgtaccacac agaccccaac ccacaagaag tagtattgga aaatgtaaca      180
198 gaacatttta acatgtggaa aaataacatg gtagaacaga tgcaggagga tataatcagt      240
200 ttatgggatc aaagcctaaa gccatgtgta aaattaaccc cactctgtgt tactttaaat      300
202 tgcaaggatg tgaatgctac taataccact aatgatagcg agggaacgat ggagagagga      360
204 gaaataaaaa actgctcttt caatatcacc acaagcataa gagatgaggt gcagaaagaa      420
206 tatgctcttt tttataaaact tgatgtagta ccaatagata ataataatac cagctatagg      480
208 ttgataagtt gtgacacctc agtcattaca caggcctgtc caaagatata ctttgagcca      540
210 attcccatac attattgtgc cccggctggt tttgcgattc taaagtgtaa tgataagacg      600
212 ttcaatggaa aaggaccatg taaaaatgtc agcacagtac aatgtacaca tggaattagg      660
214 ccagtagtat caactcaact gctgctaaat ggcagtctag cagaagaaga ggtagtaatt      720
216 agatctgaca atttcacgaa caatgctaaa accataatag tacagctgaa agaatctgta      780
218 gaaattaatt gtacaagacc caacaacaat acaagaaaaa gtatacatat aggaccaggg      840
220 agagcatttt atactacagg agaaataata ggagatataa gacaagcaca ttgtaacatt      900
222 agtagagcaa aatggaatga cactttaaaa cagatagtta taaaattaag agaacaattt      960
224 gagaataaaa caatagtctt taatcactcc tcaggagggg acccagaaat tgtaatgcac      1020
226 agttttaatt gtgaaggaga atttttctac tgtaattcaa cacaactgtt taatagtact      1080
228 tggataaata atactgaagg gtcaaataac actgaaggaa atactatcac actcccatgc      1140
230 agaataaaac aaattataaa catgtggcag gaagtaggaa aagcaatgta tgcccctccc      1200
232 atcagaggac aaattagatg ttcatcaaatt attacagggc tgctattaac aagagatggt      1260

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234 ggtattaatg agaatgggac cgagatcttc agacctggag gaggagatat gagggacaat 1320
236 tggagaagtg aattctataa atataaagta gtaaaaattg aaccattagg agtagcacc 1380
238 accaagtgca agagaagagt ggtgcaaaga gaaaaaagag cagtgggaat aggagctgtg 1440
240 ttccttgggt tcttgggagc agcaggaagc actatgggcg cagcgtcaat gacactgacg 1500
242 gtacaggcca gactattatt gtctggtata gtgcaacagc agaacaattt gctgagggct 1560
244 attgaggcgc aacagcgtat gttgcaactc acagtctggg gcatcaagca gctccaggca 1620
246 agagtcctgg ctgtggaaag atacctaggg gatcaacagc tcctggggat ttggggttgc 1680
248 tctggaaaac tcatttgctg cactgctgtg ccttggaatg ctagttggag taataaatct 1740
250 ctagatagga tttggaataa catgacctgg atggagtggg aaagagaaat tgacaattac 1800
252 acaagcgaaa tatacacact aattgaagaa tcgcagaacc aacaagaaaa gaatgaacaa 1860
254 gaattattgg aattagataa atgggcaagt ttgtggaatt ggtttgacat aacaaactgg 1920
256 ctgtggtat 1929
259 <210> SEQ ID NO: 13
260 <211> LENGTH: 643
261 <212> TYPE: PRT
262 <213> ORGANISM: Human immunodeficiency virus type 1
264 <400> SEQUENCE: 13
266 Val Glu Lys Leu Trp Val Thr Val Tyr Tyr Gly Val Pro Val Trp Lys
267 1 5 10 15
270 Glu Ala Thr Thr Thr Leu Phe Cys Ala Ser Asp Ala Lys Ala Tyr Asp
271 20 25 30
274 Thr Glu Val His Asn Val Trp Ala Thr His Ala Cys Val Pro Thr Asp
275 35 40 45
278 Pro Asn Pro Gln Glu Val Val Leu Glu Asn Val Thr Glu His Phe Asn
279 50 55 60
282 Met Trp Lys Asn Asn Met Val Glu Gln Met Gln Glu Asp Ile Ile Ser
283 65 70 75 80
286 Leu Trp Asp Gln Ser Leu Lys Pro Cys Val Lys Leu Thr Pro Leu Cys
287 85 90 95
290 Val Thr Leu Asn Cys Lys Asp Val Asn Ala Thr Asn Thr Thr Asn Asp
291 100 105 110
294 Ser Glu Gly Thr Met Glu Arg Gly Glu Ile Lys Asn Cys Ser Phe Asn
295 115 120 125
298 Ile Thr Thr Ser Ile Arg Asp Glu Val Gln Lys Glu Tyr Ala Leu Phe
299 130 135 140
302 Tyr Lys Leu Asp Val Val Pro Ile Asp Asn Asn Asn Thr Ser Tyr Arg
303 145 150 155 160
306 Leu Ile Ser Cys Asp Thr Ser Val Ile Thr Gln Ala Cys Pro Lys Ile
307 165 170 175
310 Ser Phe Glu Pro Ile Pro Ile His Tyr Cys Ala Pro Ala Gly Phe Ala
311 180 185 190
314 Ile Leu Lys Cys Asn Asp Lys Thr Phe Asn Gly Lys Gly Pro Cys Lys
315 195 200 205
318 Asn Val Ser Thr Val Gln Cys Thr His Gly Ile Arg Pro Val Val Ser
319 210 215 220
322 Thr Gln Leu Leu Leu Asn Gly Ser Leu Ala Glu Glu Val Val Ile
323 225 230 235 240
326 Arg Ser Asp Asn Phe Thr Asn Asn Ala Lys Thr Ile Ile Val Gln Leu
327 245 250 255

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330 Lys Glu Ser Val Glu Ile Asn Cys Thr Arg Pro Asn Asn Asn Thr Arg
331      260      265      270
334 Lys Ser Ile His Ile Gly Pro Gly Arg Ala Phe Tyr Thr Thr Gly Glu
335      275      280      285
338 Ile Ile Gly Asp Ile Arg Gln Ala His Cys Asn Ile Ser Arg Ala Lys
339      290      295      300
342 Trp Asn Asp Thr Leu Lys Gln Ile Val Ile Lys Leu Arg Glu Gln Phe
343 305      310      315      320
346 Glu Asn Lys Thr Ile Val Phe Asn His Ser Ser Gly Gly Asp Pro Glu
347      325      330      335
350 Ile Val Met His Ser Phe Asn Cys Glu Gly Glu Phe Phe Tyr Cys Asn
351      340      345      350
354 Ser Thr Gln Leu Phe Asn Ser Thr Trp Asn Asn Asn Thr Glu Gly Ser
355      355      360      365
358 Asn Asn Thr Glu Gly Asn Thr Ile Thr Leu Pro Cys Arg Ile Lys Gln
359      370      375      380
362 Ile Ile Asn Met Trp Gln Glu Val Gly Lys Ala Met Tyr Ala Pro Pro
363 385      390      395      400
366 Ile Arg Gly Gln Ile Arg Cys Ser Ser Asn Ile Thr Gly Leu Leu Leu
367      405      410      415
370 Thr Arg Asp Gly Gly Ile Asn Glu Asn Gly Thr Glu Ile Phe Arg Pro
371      420      425      430
374 Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Phe Tyr Lys Tyr
375      435      440      445
378 Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Lys Cys Lys
379      450      455      460
382 Arg Arg Val Val Gln Arg Glu Lys Arg Ala Val Gly Ile Gly Ala Val
383 465      470      475      480
386 Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr Met Gly Ala Ala Ser
387      485      490      495
390 Met Thr Leu Thr Val Gln Ala Arg Leu Leu Leu Ser Gly Ile Val Gln
391      500      505      510
394 Gln Gln Asn Asn Leu Leu Arg Ala Ile Glu Ala Gln Gln Arg Met Leu
395      515      520      525
398 Gln Leu Thr Val Trp Gly Ile Lys Gln Leu Gln Ala Arg Val Leu Ala
399      530      535      540
402 Val Glu Arg Tyr Leu Gly Asp Gln Gln Leu Leu Gly Ile Trp Gly Cys
403 545      550      555      560
406 Ser Gly Lys Leu Ile Cys Cys Thr Ala Val Pro Trp Asn Ala Ser Trp
407      565      570      575
410 Ser Asn Lys Ser Leu Asp Arg Ile Trp Asn Asn Met Thr Trp Met Glu
411      580      585      590
414 Trp Glu Arg Glu Ile Asp Asn Tyr Thr Ser Glu Ile Tyr Thr Leu Ile
415      595      600      605
418 Glu Glu Ser Gln Asn Gln Gln Glu Lys Asn Glu Gln Glu Leu Leu Glu
419      610      615      620
422 Leu Asp Lys Trp Ala Ser Leu Trp Asn Trp Phe Asp Ile Thr Asn Trp
423 625      630      635      640
426 Leu Trp Tyr

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/032,162

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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:16; N Pos. 453,615,639
Seq#:17; Xaa Pos. 151,205,213

VERIFICATION SUMMARY

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L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:688 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:420
L:694 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:600
L:800 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:144
L:812 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:192
L:816 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:208